



## Review

## Analysis of Uganda's policy and legal framework for the implementation of REDD +



Justine Namaalwa\*, Patrick Byakagaba

Department of Environmental Management, Makerere University, Kampala Uganda, P.O. Box 7026, Kampala, Uganda

## ARTICLE INFO

## Keywords:

REDD +  
Policies  
Laws  
Uganda  
Deforestation

## ABSTRACT

A supportive policy and legal framework is critical for the implementation of interventions to mitigate climate change such as REDD+. This paper analyses Uganda's policies and laws, with the purpose of determining whether the policy issue, objectives of policies and laws provide for a supportive environment for REDD+ activities. The policies and laws analyzed include those indicated in Uganda's Readiness preparedness proposal and any other relevant public policies. The following questions guided the analysis: Are the REDD+ activities as prescribed in proceedings of the 16<sup>th</sup> COP to UNFCCC recognized in the policy issue and characterized? Are the REDD+ activities reflected in the object and subsequent provisions of the laws reviewed? From the analysis, it was found that deforestation and forest degradation, loss of protected areas, failure to sustainably utilize natural forests, and limited implementation of forest enhancement activities are recognized as a policy issue in some but not all policies. The characterization of deforestation and forest degradation is mostly linked to proximate drivers while barriers to conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks is linked to underlying drivers. Reducing deforestation and forest degradation are the most provided for activities in the policy issue and characterization, while enhancement of forest carbon stocks and sustainable management of forests are the least considered. Reducing forest degradation and conservation of forest stocks are the most provided for in the object and subsequent provisions of the Laws, while enhancement of forest carbon stocks is the least. Conservation of forest carbon stocks and reducing forest degradation are reflected in both policy issue and laws. The current policy and legal framework is suitable mainly for addressing the drivers of deforestation and forest degradation as well as addressing the barriers to conservation of forest stocks.

## 1. Introduction

The 16<sup>th</sup> session of the Conference of the Parties (COP 16) to the United Nations Framework Convention on Climate Change (UNFCCC) that was held in Cancun agreed that developing country Parties are encouraged to contribute to mitigation actions in the forest sector by undertaking the following activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances: (a) Reducing emissions from deforestation; (b) Reducing emissions from forest degradation; (c) Conservation of forest carbon stocks; (d) Sustainable management of forests; (e) Enhancement of forest carbon stocks, thus forming the acronym REDD+ (UNFCCC, 2011). REDD+ is highly regarded as a policy instrument to mitigate climate change (Somorin et al., 2012) as well as a financial incentives-based climate change mitigation initiative that was designed to compensate national governments and sub-national actors in return for

demonstrable reduction in carbon emissions from deforestation and degradation (Agrawal et al., 2011). The implementation of REDD+ requires several coordinated national and regional policy programs, subnational projects and involvement of multiple actors (Corbera, 2012). This should further be supported by analytical and review studies to provide insights useful for successful implementation.

Most studies on REDD+ have focused on the REDD+ governance framework (Skutsch and Van Laake, 2008; Larson and Petkova, 2011; Corbera and Schroeder, 2011; Brockhaus et al., 2012; Ravikumar et al., 2015); the REDD+ architecture (Karsenty, 2008; Corbera and Schroeder, 2011); and, cataloguing and characterizing REDD+ demonstration and pilot projects (Sills et al., 2009; Wertz-Kanounnikoff and Kongphan-Apirak, 2009; Cerbu et al., 2011; Dulal et al., 2012; e.g. Bernard et al., 2014; Namaalwa et al., 2017). There is still a dearth of knowledge on the interconnections of the REDD+ international regime, and its related national strategies, with other policies and development

\* Corresponding author.

E-mail address: [namaalwa@caes.mak.ac.ug](mailto:namaalwa@caes.mak.ac.ug) (J. Namaalwa).<https://doi.org/10.1016/j.envsci.2019.02.003>

Received 22 May 2018; Received in revised form 13 February 2019; Accepted 13 February 2019

Available online 26 February 2019

1462-9011/ © 2019 Published by Elsevier Ltd.

processes impacting upon forests and land resources, and more widely driving land-use change for implementing REDD+ (Corbera and Schroeder, 2011). In their paper, Corbera and Schroeder (2011) suggested that there is need for research in the following areas for REDD+ to succeed: existing synergies and contradictions across land-use management policies at national level, and examining whether REDD+ is able to transcend forest sector regulations, based on cross-sectoral linkages.

The REDD+ Readiness Preparedness Proposal (R-PP) for Uganda indicates that the country has a policy and legal environment that is very supportive for the implementation of REDD+ (GoU, 2011), however there is no evidence of a systematic analysis to confirm it. The Uganda REDD+ strategy provides for all the five REDD+ activities (MWE, 2017), yet it is unclear whether there is a conducive policy and legal environment to enable their implementation.

More so, most of the relevant policies were formulated before the inception of REDD+ except the Uganda National Climate Change Policy, 2013; The National Agricultural Policy, 2013; and The Uganda National Land Policy, 2013. The rationale of this paper is therefore to assess whether the prevailing policy and legal environment is conducive for the implementation of REDD+ activities in Uganda. The way a policy or law is problematized influences the aspects that will be addressed in the implementation (Bacchi, 2009) and the design of the framework for implementation (Hoonbeek and Peters, 2017; Katila, 2017; Byakagaba et al., 2018).

The analysis applied follows qualitative content analysis (Divine Foundjem et al., 2013) of the policies and laws for explicit provisions for the realization of REDD+. The analysis is envisaged to provide additional guidance to countries like Uganda that are transiting from the REDD+ readiness phase to the REDD+ implementation phase. The analysis may also be useful in guiding future policy and legal reforms to facilitate full realization of the aspirations of REDD+ activities in Uganda.

### 1.1. Defining the key terms in REDD+ acronym

REDD+ is defined in the Bali Action Plan par.1(b)(iii), as policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of carbon stocks in developing countries. It is worth noting that, the definitions of the key terms in the REDD+ acronym were never standardized in the Action Plan and therefore are used quite variably (Morales-Barquero et al., 2014). Globally applicable operational definitions as well as those definitions clearly stated in the Uganda REDD+ documents have been adopted to facilitate a guided and consistent analysis in this paper.

The UN Food and Agricultural Organization defines Deforestation (D) as the conversion of forest land to another land use (FAO, 2002), which is also the definition applied in the proposed Forest Reference Emission Level (FREL) for Uganda (MWE, 2018). In the FREL, Forest Degradation (FD) is considered to encompass activities that result in a permanent reduction of forest carbon stocks (as far as can be assessed) while the structure of the tree stand does not fall below the threshold values in Uganda's definition of a forest. In the context of the Bali Action Plan (UNFCCC, 2007), Conservation of Forest carbon Stocks (CFS) refers to maintaining of carbon stocks in conservation and protected forests including forest reserves, game parks and biospheres. Sustainable Management of Forests (SMF) on the other hand, implies forests managed for sustained timber production, in such a way that carbon stocks are maintained at least at constant levels on average over time. The Uganda's FREL prescribes conservation of forest carbon stocks as maintaining forests as forests under specified management systems. This definition is restricted to natural forests. Sustainable Management of Forests is not clearly characterized in the FREL. Carbon stock enhancement has been defined as afforestation of land not previously

forest or reforestation of land previously converted from forest to another land use (Penman et al., 2016). The Uganda's FREL does not clearly define or describe carbon stock enhancement. In this paper, Enhancement of Forest Stocks (EFS) is used as a proxy for carbon stock enhancement.

## 2. Approach applied in the policy and legal analysis

### 2.1. Selection of the policies and laws to be considered

The policies and laws indicated as relevant in Uganda's R-PP (GoU, 2011), and other environment, natural resources and land use policies and laws that were considered to either be directly or indirectly linked to reduced deforestation and forest degradation, and conservation, sustainable management of forests and enhancement of carbon stocks (e.g. Banana et al., 2014) were considered and analyzed. The policies include: The Uganda Forestry policy, 2001; The National Environment Management Policy for Uganda, 1995; Uganda Wildlife Policy, 2014; The National Land Use Policy, 2007; Uganda National Climate Change Policy, 2013; The National Agricultural Policy, 2013; The Renewable Energy Policy for Uganda, 2007; and The Uganda National Land Policy, 2013. The laws considered include: The Constitution of the Republic of Uganda, 1995; The National Forestry and Tree Planting Act, 2003; The Uganda wildlife Act, 1996; The National Environment Act, 1995; The Land Act, 1998; and The Local Government Act, 1997. Subsequent reference to the policies and laws in this paper did not include the full naming and years of formulation and enactment to minimize monotony.

### 2.2. Analysis of the policies

Policies are formulated to resolve a public problem, thus, they are an indicator of what governments deem unacceptable (Knoepfel et al., 2011). The analysis followed Bacchi (2009) who suggests that policy analysis should consider how the policy issue was problematized and characterized. Problematization implies how the policy issue was conceptualized in the policy document while characterization refers to the drivers or reasons that are prescribed as the source or cause of the issue. We further applied the framework developed by Polski and Ostrom (1999) which proposes that policy analysis should interrogate provisions in the policy objectives.

While this approach gives a relatively fair understanding of the suitability of policies, it has a weakness of not capturing information on practice, yet policies include what governments choose to do or not to do (Dye, 1972). However, considering that REDD+ is a new policy instrument, reviewing the policy documents is a good starting point in the quest to have informed reforms that will ensure coherence and strengthen existing sectoral synergies for successful implementation of REDD+ initiatives.

The interrogation of the policy issue was guided by the following question: Are the drivers of deforestation and forest degradation, or barriers to conservation of forest carbon stocks, sustainable management of forests, and carbon stock enhancement which REDD+ is expected to address recognized in the policy issue and characterized? The REDD+ activity provided for in the policy was analyzed following two levels of interrogation which included occurrence and characterization. For every policy analyzed, occurrence of each REDD+ activity was assigned a single score. Similarly, occurrence of each REDD+ activity in the characterization of the policy issue was equally assigned a single score. The expected minimum and maximum scores were 0 and 10 respectively at the two levels of analysis.

Policy objectives were then analyzed by reviewing the content to establish which REDD+ activity is provided for. Conventional content analysis where text is used and a directed approach in which parameters used in the definitions of Deforestation, Forest Degradation, Sustainable Management of Forests, Conservation of Forest carbon

Stocks, and Enhancement of Forest carbon Stocks were applied (Hsieh and Shannon, 2005).

### 2.3. Interrogation of the laws

The laws were analyzed by interrogating the object of the law and subsequent provisions. This was done by reviewing the content of the laws to determine whether any of the REDD+ activities were provided for. The analysis was guided by the question: “Which REDD+ activities are reflected in the object and subsequent provisions of the laws reviewed?” For any identified activity in the object of the law and subsequent provisions, a label of “Provided for (PF)” was assigned, while a label of “Not Provided For (NPF)” was indicated where explicit provisions could not be identified. Within the content of the law, through qualitative content analysis, explicit provisions relating to any of the REDD+ activities were identified and paraphrased to capture the spirit of the law and the specific REDD+ activity that was emphasized. It was not necessary to quote the provisions verbatim considering they are readily available online for any further reference.

## 3. The results: analysis of the policies

### 3.1. Analysis of the policy issue

The Uganda Forestry Policy is the only policy that recognizes Deforestation, Forest Degradation, Sustainable Management of Forests; Conservation of Forest carbon Stocks, and Enhancement of Forest carbon Stocks as a policy issue. The National Land Use policy, Climate Change policy and Land policy recognize three of the activities while the Agricultural policy does not recognize any of them as a policy issue.

Deforestation is presented as a policy issue in five out the eight policies reviewed. These include the Forestry policy, Climate Change policy, Environment management policy, Land Use policy, and the Land policy. The identified drivers of deforestation in the Forestry policy are clearance for agriculture, the encroachment of government reserves, and the degazetting of forest reserves for alternative purposes. It also recognizes drivers such as lack of policy support, market failure, weak regulation and rural poverty. Clearing for settlements and agriculture are the recognized drivers for deforestation in the Climate Change policy. Inadequate legal protection, infrastructure development, slash and burn agriculture, and unguided changes in land use of protected areas are the drivers for deforestation mentioned in the Land Use policy. The Environment Management policy identifies over-exploitation and inadequate implementation of policies and laws as drivers of deforestation. High population growth rate and encroachment by in-migrants are the drivers of deforestation that the Land policy mentions.

Forest degradation is presented as a policy issue in five out the eight policies reviewed. These include the Forestry policy, Climate Change policy, Land Use policy, Land policy, and the Renewable Energy policy. As far as the forestry policy is concerned, forest degradation is caused by over-harvesting of forest resources and charcoal production. This is

attributed to limited institutional capacity and limited resources in central and local governments. Overgrazing, wildfires, charcoal burning and over-exploitation of wood resources for commercial purposes are the recognized drivers of forest degradation in the Climate Change policy. In the Land Use policy, forest degradation is linked to uncontrolled utilization, overharvesting and the lack of well-defined resource user rights. The policy also highlights the growth in the country's population and industrial sector which have led to an increase in demand for energy. This has in turn put increased pressure on the natural resource base, mainly forests and woodlands, leading to degradation. The Land policy relates forest degradation to the demands exerted by population growth and ineffective laws, as well as indiscriminate excisions, unregulated harvesting and encroachment for promotion of inept investment. The Renewable energy policy mentions indiscriminate cutting of trees as a driver of forest degradation.

Loss of protected areas, thus failure to conserve forest carbon stocks due to various drivers is recognized as a policy issue in five out the eight policies. These include the Forestry policy, Land Use policy, Land policy, Wildlife policy, and the National Environment Management policy. The Forestry policy attributes the threat on protected areas to weak forest governance and the alienation of forest reserves for alternative purposes, while the Land use policy identifies pursuit of economic development through urbanization, industrialization, commercial agriculture, and other forms of investment activities as the key threats to protected areas. The Land policy mentions population growth, settlement expansion, and the encroachment by in-migrants as the major threat to forest reserves, while the Wildlife policy recognizes loss of protected areas as a policy issue but does not characterize it.

Failure to sustainably utilize natural forests is recognized as a policy issue in two out of the eight policies reviewed. These include the Forestry policy and the Environment Management policy. Unsustainable management of forests in the Forestry policy is linked to barriers such as limited institutional capacity and limited resources in both central and local government to improve planning and regulation. The other barriers are limited incentive for the private sector to improve its performance in the absence of firm regulation and the enforcement of professional standards. Inadequate implementation of policies and laws is the only cause of unsustainable practices in forest utilization that is mentioned in Environment Management policy. The climate change policy is silent on the barriers for sustainable management of forests.

Limited implementation of forest carbon enhancement activities is only mentioned as a policy issue in the Forestry policy and Renewable Energy Policy. The Forest policy attributes this to reduction in the government's capacity to deliver forestry advisory services, and the relatively non-positive investment climate in the sector that limits private sector involvement in forestry development. The Renewable Energy policy indicates limited tree planting to replenish the tree stocks. Table 1 provides the outputs of the analysis of Uganda's policies to identify the REDD+ activities that are recognized as a policy issue and characterized.

**Table 1**  
Analysis of the Policy issue to identify REDD+ considerations.

Policy	Provision of REDD+ in the issue	Characterization of the issue	Total Score
The Uganda Forestry Policy, 2001	D, FD, SMF, CFS, EFS	D, FD, SMF, CFS, EFS	10
The National Land Use Policy, 2007	D, FD, CFS	D, FD, CFS	6
The Uganda National Land Policy, 2013	D, FD, CFS	D, FD, CFS	6
The National Environment Management Policy for Uganda, 1995	D, SMF, CFS	D, SMF, CFS	6
Uganda National Climate Change Policy, 2013	D, FD	D, FD	4
The Renewable Energy Policy for Uganda, 2007	FD, EFS	FD, EFS	4
Uganda Wildlife Policy, 2014	CFS	None	1
The National Agricultural Policy, 2013	None	None	0

D = Deforestation; FD = Forest Degradation, SMF = Sustainable Management of Forests; CFS = Conservation of Forest carbon Stocks; and EFS = Enhancement of Forest carbon Stocks.

**Table 2**  
The Strategic Objectives with Emphasis on REDD+.

Policy	Objectives	REDD+ activity considered
Uganda Forestry policy, 2001	The Permanent Forest Estate under government trusteeship will be protected and managed sustainably	CFS
	The development and sustainable management of natural forests on private land will be promoted	Reduce D Reduce FD
	Profitable and productive forest plantation businesses will be promoted	SMF; EFS
	Tree-growing on farms will be promoted in all farming systems	EFS
	Uganda's forest biodiversity will be conserved and managed in support of local and national socio-economic development and international obligations	CFS
	Watershed protection forests will be established, rehabilitated and conserved	CFS
Uganda National Climate Change Policy, 2013	Urban forestry will be promoted	EFS
	To promote and develop afforestation and reforestation programmes in non-forested areas	EFS
	To continue to actively promote joint REDD+ efforts involving the public and private sectors	Reduce D, Reduce FD, SMF, CFS and EFS
The Uganda National Land Policy, 2013	Promote optimal use and management of land resources	SMF
	The state shall manage and protect the natural resources held under public trust in the conformity with the principles of the public trust doctrine for the common good of all citizens of Uganda	CFS
	Government shall ensure that land resources are optimally used and sustainably managed in an integrated manner	SMF
	Government shall institutionalize mechanisms to restore, maintain and monitor the quality and productivity of land resources	Reduce FD, EFS
The National Environment Management Policy for Uganda, 1995	Conserve, preserve and restore ecosystems	CFS, EFS
	Optimize resource use and achieve a sustainable level of resource consumption	SMF
	To manage sustainably forest resources in Protected Areas, public and private land	CFS, SMF
	To promote increased forest production by the private sector and communities	EFS
	To conserve and manage sustainably wildlife resources in Protected Areas, public and private lands	CFS
	To meet the national energy needs through increased production of (plantation and on-farm) trees	EFS
The National Land Use Policy, 2007	To develop harmonized criteria for designating and alienation of conservation areas	CFS
	To maintain the integrity of protected areas	CFS
	To halt and reverse the rate of deforestation in areas outside designated forest reserves	Reduce D
	To protect and maintain all water catchments in the country	CFS
	To control forest degradation resulting from infrastructure development	Reduce FD
	Promote agroforestry and afforestation	EFS
Uganda Wildlife Policy, 2014	To conserve wildlife resources of Uganda in a manner that contributes to the sustainable development of the nation and the well-being of its people	CFS
	To sustainably manage wildlife populations in and outside Protected areas	CFS
Renewable Energy	Provide incentives for farmers to establish commercial woodlot plantations, including peri-urban plantations	EFS
	Promote in collaboration with NFA and MAAIF the growing of energy crops including fast maturing trees by the private sector	EFS
The National Agricultural Policy, 2013	None	None

D = Deforestation; FD = Forest Degradation, SMF = Sustainable Management of Forests; CFS = Conservation of Forest carbon Stocks; and EFS = Enhancement of Forest carbon Stocks.

### 3.2. Analysis of the strategic objectives

Out of the eight policies reviewed, seven policies have provisions within the objectives that are relevant to REDD+ activities. The Forestry policy and Climate Change policy have provisions relevant to all the five, the Land policy and the Land Use policy have provisions for four, while the Environment Management policy has objectives that provide for up to three REDD+ activities. The Wildlife policy provides for only conservation of forest carbon stocks while the Renewable Energy policy provides for enhancement of carbon stocks. The Agricultural policy does not have any explicitly stated objectives that relate to REDD+ activities (Table 2). Conservation of Forest carbon Stocks and Enhancement of Forest Carbon Stocks are the most provided for activities in the policy objectives, while reducing deforestation is the least recognized.

### 3.3. Analysis of the object of the law

All the six laws that were reviewed have provisions for at least one REDD+ activity (Table 3). The Constitution provides for four out of the five activities. The Forestry and Tree Planting Act and the Environment Act recognize all the five in the object of the law, while other four laws provide for between three to four REDD+ activities in the object

(Table 3).

Conservation of Forest Carbon Stocks and Reducing Deforestation are the most provided for in the object of all the laws. Conservation of Forest Carbon Stocks is provided for in the object of all the laws. Enhancement of Forest Carbon Stocks is the least recognized activity in the object of the laws.

### 3.4. Other subsequent provisions of the laws

All the six laws that were reviewed have provisions other than in the object that are supportive of REDD+ activities (Table 4). The Forestry and Tree Planting Act and the National Environment Act have provisions supportive of all the five REDD+ activities. The Land Act and Local Government Act have provisions for three of the five activities, while the wildlife Act only provides for reducing Forest Degradation and Conservation of Forest Carbon Stocks. Reducing Forest Degradation and Conservation Forest Carbon Stocks were the most provided for amongst the REDD+ activities in the other provisions of the Laws beyond the object. The least provided for in the subsequent provision were Enhancement of Forest Carbon Stocks and Sustainable Management of Forests.



**Table 3**  
Recognition of REDD+ in the Object of the Law.

Law	Reduce Deforestation	Reduce Forest Degradation	Sustainable Management of Forests	Conservation of forest stocks	Enhancement of forest carbon stocks
1. The Constitution of the Republic of Uganda, 1995	PF	PF	PF	PF	NPF
2. The National Forestry and Tree Planting Act, 2003	PF	PF	PF	PF	PF
3. The National Environment Act, 1995	PF	PF	PF	PF	PF
4. The Uganda wildlife Act, 1996	PF	PF	PF	PF	NPF
5. The Land Act, 1998	PF	PF	NPF	PF	NPF
6. The Local Government Act, 1997	NPF	PF	NPF	PF	PF

PF = Provided For; NPF = Not Provided For.

#### 4. Discussion

The Uganda Forestry policy provides for all the REDD+ activities in the policy issue as well as strategic objectives, thus providing a supportive environment in the forestry sub-sector. The Land policy and Land Use policy which are the overarching policies governing land and land use respectively do not recognize sustainable management of forests and enhancement of forest stocks in the policy issue. This may limit their inclusion in local and national land use plans, sectoral plans and budgets for the implementation of these policies. Corbera and Schroeder (2011) posit that countries that cater for all REDD+ activities in their land use policies can potentially benefit from synergies and also minimize contradictions in the implementation of REDD+. Cross-sectoral linkages and involvement of multi-level governance systems which are important interventions to address climate change require over-arching policies that cater for all the aspirations of the different sectors (Serrao-Neumann et al., 2014).

Agricultural expansion is a key driver of deforestation in Uganda (Namaalwa et al., 2001; Mwavu and Witkowski, 2008; GoU, 2011; Twongyirwe et al., 2015), however the Agricultural policy is silent in the policy issue and objectives in regards to addressing deforestation. It will be difficult to implement projects that focus on agricultural expansion as a key driver for deforestation, since the relevant sectoral policy does not recognize it as an important policy issue. In their paper, Lurance et al. (2014) contend that the threats to tropical nature can only be addressed if agricultural policies prioritize its conservation. Addressing deforestation requires effective and meaningful interaction and engagement between various state and non-state actors as well as suitable policy and legal frameworks for the relevant sectors (Brockhaus et al., 2014).

This analysis has shown that the characterization of deforestation as a policy issue focuses more on the proximate drivers with very limited coverage of the underlying drivers. This is in spite studies (e.g. Angelsen and Kaimowitz, 1999) indicating that the underlying causes of deforestation often determine the immediate causes, which in turn influence the agents who are the sources of deforestation. It is therefore important to identify and address underlying causes of deforestation as well.

Each of the policies and laws analyzed had different drivers/causes of deforestation and forest degradation in the characterization of the policy issue suggesting that there was limited coordination in the processes that led to the formulation of these policies. The benefits associated with complementarity of policies such as coordinated plans and budgets will not easily be harnessed due to differences in the way sectors characterize deforestation and forest degradation.

The underlying drivers of deforestation in the policies reviewed included market failure, weak regulation, rural poverty and population growth. In a meta-analysis study of 117 countries by Meyer et al. (2003), poverty, weak incentives to manage forestlands, failure to control corruption and high rural populations were identified as critical underlying drivers of deforestation that countries ought to address.

Therefore, the limited explicit identification of other important drivers of deforestation in the problematization of the policy issue may impede the targeted reduction of emissions from deforestation. This is because studies elsewhere have shown that when an issue is embedded in the policy issue, the chances that it will be prioritized are usually high (Bacchi, 2009; Hoornbeek and Peters, 2017). Weak incentives to manage forestlands and failure to control corruption are not recognised in the policies analyzed, yet there is growing evidence that lack economic incentives for private forest owners is part of the reason for unsustainable practices (McLennan, 2008). Corruption in the forest sector in Uganda has been recognised as one of the challenges that ought to be addressed if sustainability is to be achieved (Turyahabwe et al., 2007; Obua et al., 2010).

Loss of protected areas is mainly characterized as being caused by underlying drivers such as weak governance and economic policies. There were no proximate drivers identified with the exception of settlement expansion in the Land policy. Studies elsewhere (e.g. Kiringe et al., 2007) have found that human encroachment, overexploitation of natural resources, agriculture expansion, infrastructure development and other land use changes as very significant drivers of loss of protected areas. Failure of the policies to explicitly identify the direct threats to protected areas may limit the possible interventions to address them at policy level.

Lack of sustainable management of forests was linked to weak enforcement of policies and laws with only the Forestry policy additionally mentioning the limited incentives for improving the performance of the private sector. This suggests that lack of incentives to promote sustainable management of forests has not been prioritized in Uganda's policies, yet studies (Rice et al., 1997; e.g. Durst et al., 2006) posit that they are important for adoption of principles for sustainable management of forests. Limited implementation of forest carbon enhancement activities was only mentioned in the Forestry policy. Other relevant sectoral policies did not identify it as a policy issue, and therefore it may not be prioritized by other land-use sectors.

The Wildlife policy only recognizes loss of protected areas as an issue while the drivers for Deforestation and Forest Degradation, and other barriers for Conservation of Forest carbon Stocks and Enhancement of Forest carbon Stocks are missing. This may limit the implementation of the other four activities in landscapes that are in wildlife conservation areas, and thus, governed using the wildlife policy. This ought to be taken seriously by duty bearers considering that about 50% of the permanent forest estate in Uganda is found in wildlife conservation areas (GOU, 2001), and hence governed by a distinct policy and law from that of forestry which provides for all REDD+ activities.

The Local Government Act did not provide for the reduction of deforestation and sustainable management of forests, yet the Constitution, National Environment Act and the National Forestry and Tree Planting Act recognize local governments as key actors in maintaining forests. The implementation of sub-national REDD+ projects which involve ceding functional roles to administrative units

**Table 4**  
Other Provisions in the Laws with a reference to REDD+ activities.

Law	Provisions	Linkage with REDD+ activities
The Constitution of the Republic of Uganda, 1995	Protection and preservation of the environment from abuse, pollution and degradation Utilization of natural resources, including forests should be done in a manner that environmental needs of present and future generations are taken care of The state shall protect forest reserves, national parks, game reserves and any land reserved for ecological purposes through laws enacted by either the government or local government	Reduce D Reduce FD SMF CFS
The National Forestry and Tree Planting Act, 2003	Reduction or Conversion of a forest reserve shall be done only if an area of at least equivalent in size is simultaneously declared as a central forest reserve Forest reserves shall be developed and managed to promote their health and vitality <ul style="list-style-type: none"> <li>forests shall be developed and managed so as to sustain the potential yield of their economic, social, health and environmental benefits</li> <li>The government or local government shall hold in trust for the people and protect forest reserves</li> <li>The minister may with the approval of parliament signified by its resolution, by statutory order, declare an area to be a central forest reserve or local forest reserve</li> <li>The government or local government may declare by statutory order tree species to be reserved</li> <li>The government may provide technical services to all categories of people involved in the development of community forests and private forests and this assistance may include the promotion of agroforestry and tree growing</li> <li>A tree fund shall be established and used to promote tree planting and growing at national and local level and to support tree planting and growing efforts of non-commercial nature which are of benefit to the public</li> </ul>	Reduce D Reduce FD SMF CFS EFS
The National Environment Act, 1995	<ul style="list-style-type: none"> <li>An environmental impact assessment shall be undertaken by the developer for any project that may have an impact on the environment</li> <li>Government shall issue guidelines and prescribe measures for the sustainable management and utilization of rangelands</li> <li>The principle of optimum sustainable yield shall be ensured in the use of natural resources</li> <li>Government will issue guidelines and prescribe measures for to the protection of forests in protected areas, including forest reserves, national parks and game reserves, forests on private land and water catchment areas</li> <li>Government may expressly exclude human elements in any forest area by declaring a forest area a specially protected forest</li> <li>Government may reclaim lost ecosystems where possible and reverse the degradation of natural resources</li> <li>Each district local government shall prepare a district action plan that species areas for afforestation and reforestation and shall take measures to plant trees and other vegetation in areas specified</li> <li>Government will take measures to encourage planting of trees or woodlots by individual land users, institutions and community groups for energy</li> <li>An environmental restoration order may be issued requiring restoration of sites that have been disturbed</li> </ul>	Reduce D Reduce FD SMF CFS EFS
The Uganda wildlife Act, 1996	The Agency responsible for wildlife conservation areas is mandated to control and monitor industrial and mining developments in wildlife protected areas <ul style="list-style-type: none"> <li>The Agency responsible for wildlife conservation areas is mandated to identify and recommend areas for declaration as wildlife conservation areas</li> <li>The minister may, after consultation with the local government council in whose area a proposed wildlife conservation area fall, and with the approval of parliament signified by its resolution, by statutory instrument declare an area of land to be a wildlife conservation area</li> <li>The Minister may, on the recommendation of the board, by statutory order, declare any species of wild plant or wild animal specified in the order to be classified as a protected species</li> </ul>	Reduce FD CFS
The Land Act, 1998	A community might set aside one or more areas of land for common use for the purpose of gathering wood fuel and building materials A community might set aside one or more areas of land for common use for the purpose of gathering wood fuel and building materials <ul style="list-style-type: none"> <li>Government or local government shall hold in trust forest reserves national parks and any other land reserved for ecological purposes for the common good of the citizens of Uganda</li> <li>The Government or a local government shall not lease out or otherwise alienate any natural resource including forests</li> </ul>	Reduce D Reduce FD CFS
The Local Government Act, 1997	Local governments are responsible for taking measures for the prohibition, restriction, prevention, regulation or abatement of grass, forest or bush fires District councils are responsible for assisting the Government to preserve the environment through protection of forests, wetlands, lake shores, streams and prevention of environmental degradation District councils are responsible for planting trees and shrubs in public parks	Reduce FD CFS EFS

D = Deforestation; FD = Forest Degradation, SMF = Sustainable Management of Forests; CFS = Conservation of Forest carbon Stocks; and EFS = Enhancement of Forest carbon Stocks.

subordinated to the nation state, may be difficult to implement through local governments which are governed by the Local Government Act. It is critical to have more accommodating national-level frameworks in order to implement REDD+ at various spatial scales within a country (e.g. Bernard et al., 2014; Ravikumar et al., 2015).

## 5. Conclusion

The problematization of Uganda's policies in relation to REDD+ provides mainly for deforestation and forest degradation in the policy issue and characterization, while Conservation of Forest carbon Stocks is the most provided for in the objectives. Conservation of forest carbon stocks and reducing Forest Degradation are the most provided for activities in the laws. There is no clear convergence in the

characterization of the policy issue across the policies reviewed. Enhancement of forest stocks and Sustainable Management of Forests are the least considered activities in the policy issue, characterization and objectives of the policies reviewed. Enhancement of forest stocks is the least provided for in the laws that were reviewed.

Uganda's policy and legal framework is mainly suitable for addressing the drivers of deforestation and forest degradation as well as addressing the barriers to conservation of forest carbon stocks. It can therefore be concluded that Uganda has a relatively suitable policy and legal environment to harness from ecosystem service markets that target interventions that reduce deforestation and forest degradation, and conservation of forest stocks. Addressing the barriers to Sustainable Management of Forests and Enhancement of Forest Carbon Stocks under REDD+ may require policy and legal reforms.

## Notes

The following policies and laws were analyzed  
 The Uganda Forestry policy, 2001  
 The National Environment Management Policy for Uganda, 1995  
 Uganda Wildlife Policy, 2014  
 The National Land Use Policy, 2007  
 Uganda National Climate Change Policy, 2013  
 The National Agricultural Policy, 2013  
 The Renewable Energy Policy for Uganda, 2007  
 The Uganda National Land Policy, 2013  
 The Constitution of the Republic of Uganda, 1995  
 The National Forestry and Tree Planting Act, 2003  
 The Uganda wildlife Act, 1996  
 The National Environment Act, 1995  
 The Land Act, 1998  
 The Local Government Act, 1997

## Competing interest

Both authors do not have any competing interests to disclose.

## Acknowledgement

We acknowledge the anonymous reviewers whose comments were very instrumental in improving this paper.

## References

- Agrawal, A., Nepstad, D., Chhatre, A., 2011. Reducing emissions from deforestation and forest degradation. *Annu. Rev. Environ. Resour.* 36 (1), 373–396. <https://doi.org/10.1146/annurev-enviro-042009-094508>.
- Angelsen, A., Kaimowitz, D., 1999. Rethinking the causes of deforestation: lessons from economic models. *World Bank Res. Obs.* 14 (1), 73–98. <https://doi.org/10.1093/wbro/14.1.73>.
- Bacchi, C., 2009. *Analysing Policy*. Pearson Higher Education AU.
- Banana, A.Y., Byakagaba, P., Russell, A.J., Waiswa, D., Bomuhangi, A., 2014. A Review of Uganda's National Policies Relevant to Climate Change Adaptation and Mitigation: Insights from Mount Elgon. CIFOR.
- Bernard, F., Minang, P.A., Adkins, B., Freund, J.T., 2014. REDD+ projects and national-level readiness processes: a case study from Kenya. *Clim. Policy* 14 (6), 788–800. <https://doi.org/10.1080/14693062.2014.905440>.
- Brockhaus, M., Obidzinski, K., Dermawan, A., Laumonier, Y., Luttrell, C., 2012. An overview of forest and land allocation policies in Indonesia: is the current framework sufficient to meet the needs of REDD+? *For. Policy Econ.* 18, 30–37. <https://doi.org/10.1016/j.forpol.2011.09.004>.
- Brockhaus, M., Di Gregorio, M., Carmenta, R., 2014. REDD+ policy networks: exploring actors and power structures in an emerging policy domain. *Ecol. Soc.* 19 (4). <https://doi.org/10.5751/ES-07098-190429>. (accessed 17 July 2017).
- Byakagaba, P., Egeru, A., Barasa, B., Briske, D.D., 2018. Uganda's rangeland policy: intentions, consequences and opportunities. *Pastoralism* 8 (1), 7.
- Cerbu, G.A., Swallow, B.M., Thompson, D.Y., 2011. Locating REDD: a global survey and analysis of REDD readiness and demonstration activities. *Environ. Sci. Policy* 14 (2), 168–180. <https://doi.org/10.1016/j.envsci.2010.09.007>.
- Corbera, E., 2012. Problematising REDD+ as an experiment in payments for ecosystem services. *Curr. Opin. Environ. Sustain.* 4 (6), 612–619. <https://doi.org/10.1016/j.cosust.2012.09.010>.
- Corbera, E., Schroeder, H., 2011. Governing and implementing REDD+. *Environ. Sci. Policy* 14 (2), 89–99. <https://doi.org/10.1016/j.envsci.2010.11.002>.
- Divine Foundjem, T., Tchoundjeu, Z., Speelman, S., D'Haese, M., Degrande, A., et al., 2013. Policy and legal frameworks governing trees: incentives or disincentives for smallholder tree planting decisions in Cameroon? *SMALL-SCALE For.* 12 (3), 489–505. <https://doi.org/10.1007/s11842-012-9225-z>.
- Dulal, H.B., Shah, K.U., Sapkota, C., 2012. Reducing emissions from deforestation and forest degradation (REDD) projects: lessons for future policy design and implementation. *Int. J. Sustain. Dev. World Ecol.* 19 (2), 116–129. <https://doi.org/10.1080/13504509.2012.654410>.
- Durst, P.B., McKenzie, P.J., Brown, C.L., Appanah, S., 2006. Challenges facing certification and eco-labelling of forest products in developing countries. *Int. For. Rev.* 8 (2), 193–200. <https://doi.org/10.1505/ifer.8.2.193>.
- Dye, T.R., 1972. Policy analysis and political science: some problems at the interface. *Policy Stud. J.* 1 (2), 103–107.
- FAO, 2002. Proceedings: expert meeting on harmonizing forest-related definitions for use by various stakeholders. Food and Agriculture Organization of the United Nations (FAO).
- GoU, 2001. The Uganda Forestry Policy, 2001. Government of Uganda.
- GoU, 2011. REDD Readiness Preparation Proposal for Uganda. Government of Uganda.
- Hoornbeek, J.A., Peters, B.G., 2017. Understanding policy problems: a refinement of past work. *Policy Soc.* 36 (3), 365–384. <https://doi.org/10.1080/14494035.2017.1361631>.
- Hsieh, H.-F., Shannon, S.E., 2005. Three approaches to qualitative content analysis. *Qual. Health Res.* 15 (9), 1277–1288. <https://doi.org/10.1177/1049732305276687>.
- Karsenty, A., 2008. The architecture of proposed REDD schemes after Bali: facing critical choices. *Int. For. Rev.* 10 (3), 443–457. <https://doi.org/10.1505/ifer.10.3.443>.
- Katila, P., 2017. Forestry development priorities in Finnish national forest programmes. *Int. For. Rev.* 19 (1), 125–138. <https://doi.org/10.1505/146554817822407411>.
- Kiringe, J.W., Okello, M.M., Ekajul, S.W., 2007. Managers' perceptions of threats to the protected areas of Kenya: prioritization for effective management. *Oryx* 41 (03). <https://doi.org/10.1017/S0030605307000218>.
- Knoepfel, P., Larrue, C., Hill, M., Varone, F., 2011. *Public Policy Analysis*. Policy Press.
- Larson, A.M., Petkova, E., 2011. An introduction to forest governance, people and REDD+ in Latin America: obstacles and opportunities. *Forests* 2 (1), 86–111. <https://doi.org/10.3390/f2010086>.
- Laurance, W.F., Sayer, J., Cassman, K.G., 2014. Agricultural expansion and its impacts on tropical nature. *Trends Ecol. Evol.* 29 (2), 107–116. <https://doi.org/10.1016/j.tree.2013.12.001>.
- McLennan, M.R., 2008. Beleaguered chimpanzees in the agricultural district of Hoima, Western Uganda. *Primate Conserv.* 23 (1), 45–54. <https://doi.org/10.1896/052.023.0105>.
- Meyer, A.L., Van Kooten, G.C., Wang, S., 2003. Institutional, social and economic roots of deforestation: a cross-country comparison. *Int. For. Rev.* 5 (1), 29–37.
- Morales-Barquero, L., Skutsch, M., Jardel-Peláez, E.J., Ghilardi, A., Kleinn, C., et al., 2014. Operationalizing the definition of forest degradation for REDD+, with application to Mexico. *Forests* 5 (7), 1653–1681. <https://doi.org/10.3390/f5071653>.
- Mwavu, E., Witkowski, E., 2008. Land-use and cover changes (1988–2002) around Budongo Forest Reserve, NW Uganda: implications for forest and woodland sustainability. *Land Degrad. Dev.* 19, 606–622.
- MWE, 2017. Draft Final REDD+ National Strategy. Uganda's National REDD+ Programme-MWE/CONs/14-15/00439. Ministry of Water and Environment, Republic of Uganda.
- MWE, 2018. Proposed Forest Reference Level for Uganda. Ministry of Water and Environment, Republic of Uganda.
- Namaalwa, J., Gombya, W., Hofstad, O., 2001. The profitability of deforestation of private forests in Uganda. *Int. For. Rev.* 3 (4), 299–306.
- Namaalwa, J., Nantongo, P., Nabanoga, G.N., 2017. REDD+ readiness phase in Uganda: learning from a carbon offset project implemented in Ongo Community Forest in Mid-Western Uganda. *Int. For. Rev.* 19 (3), 321–332. <https://doi.org/10.1505/146554817821865054>.
- Obua, J., Agea, J.G., Ogwal, J.J., 2010. Status of forests in Uganda. *Afr. J. Ecol.* 48 (4), 853–859. <https://doi.org/10.1111/j.1365-2028.2010.01217.x>.
- Penman, J., Green, C., Olofsson, P., Raison, J., Woodcock, C., et al., 2016. Integration of Remote-sensing and Ground-based Observations for Estimation of Emissions and Removals of Greenhouse Gases in Forests: Methods and Guidance from the Global Forest Observations Initiative.
- Polski, M.M., Ostrom, E., 1999. An Institutional Framework for Policy Analysis and Design.
- Ravikumar, A., Larson, A., Duchelle, A., Myers, R., Tovar, J.G., 2015. Multilevel governance challenges in transitioning towards a national approach for REDD+: evidence from 23 subnational REDD+ initiatives. *Int. J. Commons* 9 (2). <https://doi.org/10.18352/ijc.593>.
- Rice, R.E., Gullison, R.E., Reid, J.W., 1997. Can sustainable management save tropical forests? *Sci. Am.* 276 (4), 44–49. <https://doi.org/10.1038/scientificamerican0497-44>.
- Serrao-Neumann, S., Crick, F., Harman, B., Sano, M., Sahin, O., et al., 2014. Improving cross-sectoral climate change adaptation for coastal settlements: insights from South East Queensland, Australia. *Reg. Environ. Change* 14 (2), 489–500. <https://doi.org/10.1007/s10113-013-0442-6>.
- Sills, E., Madeira, E.M., Sunderlin, W.D., Wertz-Kanounnikoff, S., et al., 2009. The evolving landscape of REDD+ projects. In: Angelsen Brockhaus, M., Kanninen, M., Sills, E., Sunderlin, W.D. (Eds.), *Wertz-Kanounnikoff Realising REDD Natl. Strategy Policy Options* CIFOR, Bogor, Indonesia, pp. 265–280.
- Skutsch, M., Van Laake, P.E., 2008. REDD as multi-level governance In-The-Making. *Energy Environ.* 19 (6), 831–844. <https://doi.org/10.1260/095830508785363622>.

- Somorin, O.A., Brown, H.C.P., Visseren-Hamakers, I.J., Sonwa, D.J., Arts, B., et al., 2012. The Congo Basin forests in a changing climate: policy discourses on adaptation and mitigation (REDD+). *Glob. Environ. Change* 22 (1), 288–298. <https://doi.org/10.1016/j.gloenvcha.2011.08.001>.
- Turyahabwe, N., Geldenhuys, C.J., Watts, S., Obua, J., 2007. Local organisations and decentralised forest management in Uganda: roles, challenges and policy implications. *Int. For. Rev.* 9 (2), 581–596. <https://doi.org/10.1505/for.9.2.581>.
- Twongyirwe, R., Sheil, D., Sandbrook, C.G., Sandbrook, L.C., 2015. REDD at the crossroads? The opportunities and challenges of REDD for conservation and human welfare in South West Uganda. *Int. J. Environ. Sustain. Dev.* 14 (3), 273–298.
- UNFCCC, 2007. Bali, Indonesia. Report of the Conference of the Parties on Its Thirteenth Session, Bali 3rd–15th December.
- UNFCCC, 2011. Report of the Conference of the Parties on Its Sixteenth Session, Held in Cancun from 29 November to 10 December 2010.
- Wertz-Kanounnikoff, S., Kongphan-Apirak, M., 2009. Emerging REDD+: A Preliminary Survey of Demonstration and Readiness Activities. CIFOR, Bogor, Indonesia.

**Justine Namaalwa**, PhD., is currently a Senior Lecturer at the School of Forestry, Environmental and Geographical Sciences, Makerere University. Justine has focused teaching and research assignments in the areas of natural resources economics and governance, forestry resource assessment and Ecosystem service markets. She is a member of; the REDD+ National Technical Committee; the Forestry working Group of Uganda; and the National Technical working group on Uganda Wealth Accounting and Valuation of Ecosystem Services. She has contributed to the National REDD+ processes through the development of technical reports and working papers.

**Patrick Byakagaba**, PhD., is currently a Lecturer at the School of Forestry, Environmental and Geographical Sciences, Makerere University. His research interests are in environmental and natural resource governance and public policy processes. He is a member of several working groups involved in national policy and planning processes for the environment and natural resource sub-sector in Uganda. He has contributed to the National REDD+ processes as a member of the working group on policy and also conducted several regulatory impact assessments for different Ministries in Uganda. He is a member of the Commission on Environmental, Economic and Social Policy of the IUCN.